

Overseas Programmes (For MAE students only)



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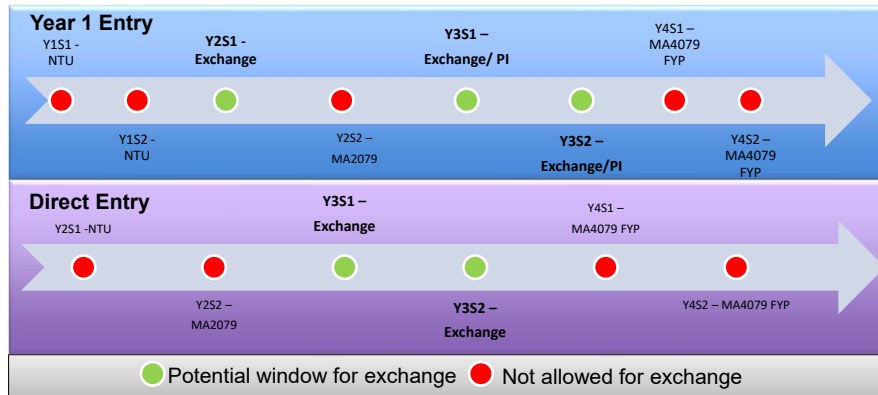
Exchange Programme Overview

	GEM Explorer	GEM Discoverer	SUSEP
Programme Types	Overseas Exchange	Overseas Exchange	Local Exchange at NUS or SMU
Programme Duration	Semester Long Exchange	Special term exchange (Summer Studies, Winter Studies)	Full Exchange (One semester – S1 or S2) or Partial Exchange
Minimum CGPA Requirement	3.3	2.0	3.5
Number of AUs allowed for credit transfer	<u>22AUs or 24 AUs</u> for ABP students.	<u>6 AUs.</u> No CORE. Capped at <u>maximum 1 Major PE with UE/BDE.</u>	Normal NTU semester academic load, available here .
Eligibility	Student must complete at least 1 semester of studies at the point of application and at least 2 semesters at the point of admission to the host institution.		

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When to go for Semester Exchange?



Note:

- MA2079 Engineering Innovation & Design (EID), is compulsory and only offered in **Sem 2**. Please email Ms Tiana, Thaiyana@ntu.edu.sg if you have questions on EID matters.
- Accelerated Bachelor's Programme (ABP) Student should not attend in Year 3 Sem 2 due to **FYP and PI** start this semester.
- Due to MA4079 Final Year Project (FYP), potential delay in receiving overseas results/transcript₃ in which can result in a delay in graduation.



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Before Applying for exchange..



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Things to watch out for... Academic Calendar

Join in the semester no later than Week 4: 30 Jan – 3 Feb 2023 (For Exchange in AY2022/23 S1).

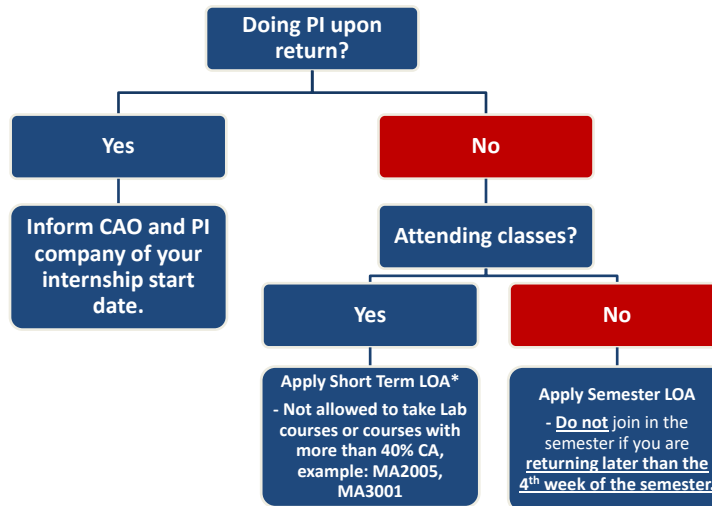
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Returning to NTU...LATE(in Teaching Week 3)!



*Email mae_reg@ntu.edu.sg if you encounter any course registration issues.



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Things to watch out for... Course Offerings

- Some MAE courses only offered in either Sem 1 or Sem 2 only. Take note of this when planning your exchange.

Course Code	Course Title	AU	Pre-Requisite	Offering Semester
MA3001	Machine Element Design	3	Having read MA2001, MA2002 and MA2005	Sem 1 & 2
MA3002	Solid Mechanics and Vibration	3	MA2001	Sem 1 & 2
MA3003	Heat Transfer	3	MA2007	Sem 1 & 2
MA3004	Mathematical Methods in Engineering	3	MH1810 & MH1811 or CY1203 or MH2812 or CY1602 or MH2810	Sem 1 & 2
MA3005/ MA3705	Control Theory / Aerospace Control Theory	3	Having read MA2006	Sem 1 & 2
MA3006	Fluid Mechanics	3	MA2003	Sem 1 & 2
MA3010	Thermodynamics & Heat Transfer	3	MA2003	Sem 1
MA3071	Engineering Experiments (ME)	1		Sem 1 & 2
MA3072	Engineering Experiments (AE)	1		Sem 1
MA3700	Aircraft Structures I	3	MA2001	Sem 1
MA3701	Aerodynamics	3	MA2003	Sem 1
MA3702	Aircraft Propulsion	3	MA2007	Sem 1
MA3703	Flight Dynamics	2	MA2701 & MA3705	Sem 1
MA3704	Aircraft Electrical Devices	3		Sem 1
MA4001	Engineering Design	4	Having Read MA3001	Sem 1 & 2
MA4002	Fluid Dynamics	3	MA3006	Sem 1 & 2

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Things to watch out for...Language of instruction

Overview of ECTS subjects on Faculty of Mechanical Engineering

Academic year 2018/2019

Code	Title	Credits	Language of Instruction	Semester	Contact
330-0101/01	Introduction to Mechanical Vibrations and Structural Dynamics	5	English	Winter	doc. Ing. Jiří Podešva, Ph.D.
330-0301/02	Statics	5	Czech, English	Summer	Ing. Milada Hlaváčková, Ph.D.
330-0302/02	Dynamics I	5	Czech, English	Winter	Ing. Zdeněk Poruba, Ph.D.
330-0304/03	Technical Vibrations	5	Czech, English	Winter	doc. Ing. Jiří Podešva, Ph.D.
330-0305/02	Mechanics of Materials	5	Czech, English	Winter, Summer	Dr. Ing. Ludmila Adamková
330-0306/03	Mechanics of Materials 2	5	Czech, English	Summer	Dr. Ing. Ludmila Adamková
330-0309/02	FEM - ANSYS	2	Czech, English	Summer	Ing. Pavel Maršálek

- For Core/Major PE, the course should be taught in English with assessments/Examinations in English.
- Only language course to be mapped as UE/BDE can be taught in non-English.

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Maximum AUs allowed for Credit Transfer

22AUs

- All MAE students
- Including 1AU laboratory course (MA3071/MA3072)

24AUs

- Applicable to ABP/DDP/Double major students only.
- Including 1AU laboratory course (MA3071/MA3072)

- The minimum grade to be counted for credit(AU) transfer must be equitable to a **Pass grade** at the host university.
- All Pass and Fail grades will be reflected in Degree Audits and transcripts.

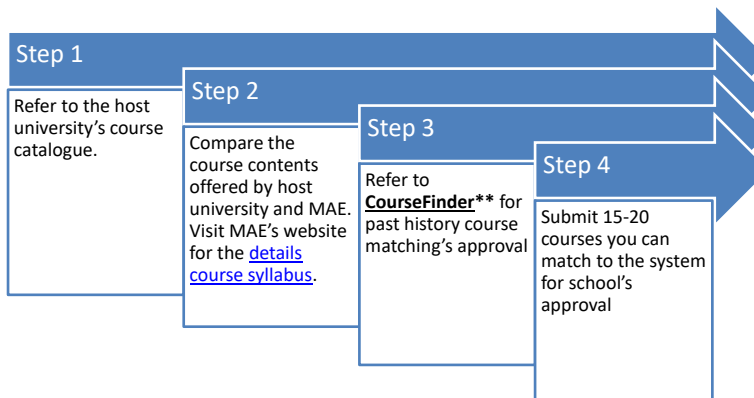
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How to do course matching?



Note:

- Approval will not be given to course matching for courses no longer offered in NTU.
- Student must obtain re-approval of courses that were in the CourseFinder. Not all approved course matchings found in the CourseFinder will be approved again as School are constantly reviewing the curriculum.
- **[Studentlink](#) > Academic Services > Undergraduate > GEM Explorer CourseFinder

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Course matching criteria

The decision to approve/reject each course matching is not restricted to, but is largely based on the following factors:

1. Match in content (approximately 75% match)
2. Number of contact hours (lectures + tutorials)
3. The course must have some form of assessment (e.g. test, projects, exam etc)

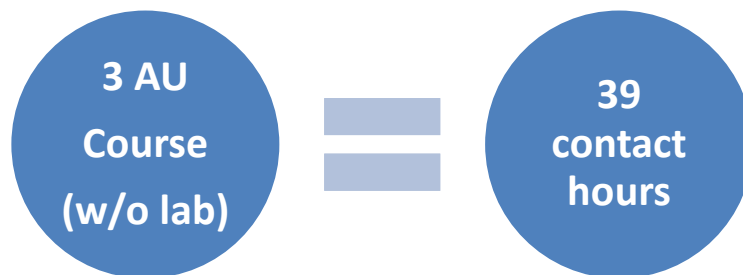
**Students are discouraged from reading courses that are pitched at the postgraduate level

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Course matching – Contact hours



- For a UE/BDE with contact hours <39 hrs, the AUs granted may be reduced.
- For UE/BDE with contact hours >39 hrs, the maximum number of AU granted remains as 3 AUs

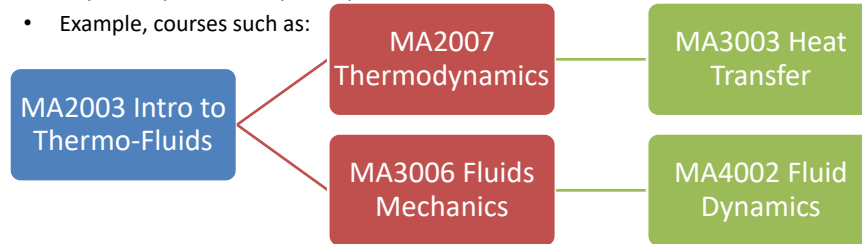
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Course matching – Pre-requisites

- **NOT** allowed to read any pre-requisite concurrently with another course that requires a pass in that pre-requisite
- Example, courses such as:



- A pre-requisite **may be** read concurrently with the immediate downstream course only if this pre-requisite is classified as a “having read” pre-requisite instead of a “having passed”.

MA3005 Control Theory

[Pre-requisite: **Having read** MA2006; Academic Unit: 3.0]

Content: Introduction and Revision of Laplace Transform, System Responses - transient and steady, PID Controls, Root Locus Technique, Frequency Response Methods.

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Course matching – Major PE

- Students who attend an overseas exchange can read Major PE regardless of offering semester in MAE. (refer to MA48XX courses in the course curriculum page)
- ME students who read the Aeronautical Engineering specialisation may read any Major PE offered to AE students, provided all the necessary pre-requisites are met.

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Course matching:

AERO students specializing in Mechanical Engineering

- AERO students specializing in Mechanical Engineering should **NOT** read the following courses on exchange:

SPECIALISATION IN MECHANICAL ENGINEERING		
AERO students will have to read the following courses under the specified course types to fulfil the specialisation:		
COURSE CODE	COURSE TITLE	Suggested Study Year ⁺
MA2002	Theory of Mechanism	3 or 4
MA2009+	Introduction to Electrical Circuits & Electronic Devices	3 or 4
MA3001	Machine Element Design	3 or 4
MA3704	Aircraft Electrical Devices	3 or 4
MA4002	Fluid Dynamics	3 or 4

⁺MA2009 and MA5005 are mutually exclusive courses.

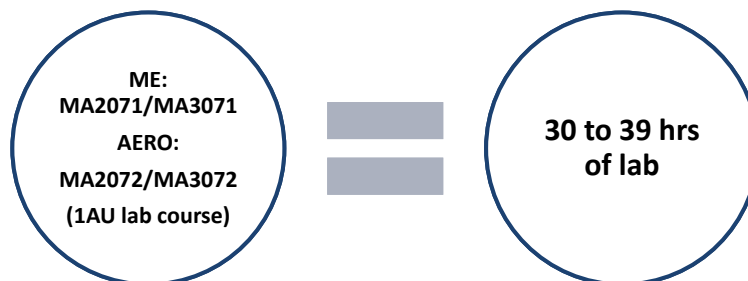
- Courses listed on above **must be graded**. Details can be found on the MAE website, click [here](#).

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How to do LAB course matching?



- A maximum of 1 laboratory course is allowed for credit transfer.
- Lab components may be considered for mapping lab course. Only 1 lab course matching is required in the course matching system. Without double counting, a **minimum of 30 lab hours** is required for approval.

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How to do LAB course matching?

MA3071 ENGINEERING EXPERIMENTS (ME) 62643,41731,62716 Mechanical Vibrations, Geometrical metrology and machine testing, Digital Control Systems

Core 1 Approved Subject to success [Click to get this request for auto-approval](#)

Course Contents/Syllabus : Mechanical Vibrations (62643): 20 hrs + Geometrical metrology and machine testing (41731): 13 hrs + Digital Control Systems (62716) +15 hrs

URL for Course Info :-

Total Number of Contact Hours for the entire course :-48

Prescribed Text Books & Chapters Covered :-

Mode of Assessment :-

Number of credits awarded by host university to the course :-

Teaching Staff Details :-Danilo Quagliotti Email: danqua@mekdtu.dk


Language of instruction of this course :-English

Semester in which student will take/read this course :-2

Student's remarks :-

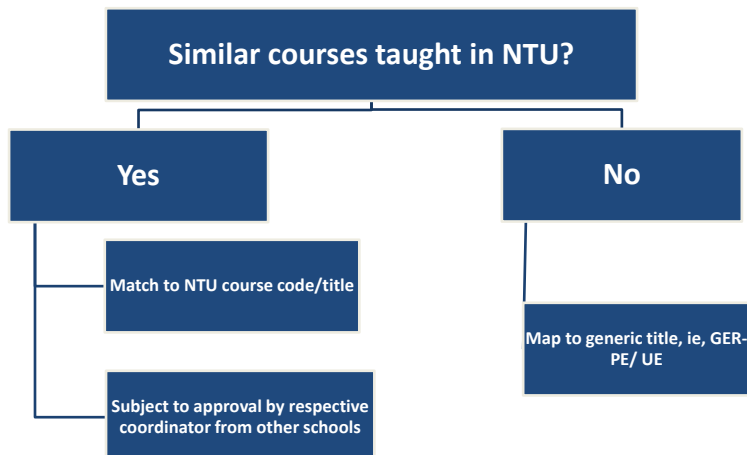
**Total Lab hours =
No. of lab sessions X
No. of lab hours per
session**

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Course matching – GER-PEs / UEs / BDEs



Students should match overseas courses to specific NTU courses (wherever possible), instead of mapping to generic categories such as UE, BDE and GER-PE.

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Course matching – Minor Programmes

- Seek prior approval (by written endorsement or email) from the School offering the Minor.
- MAE Exchange Coordinators should be copied in all correspondences.

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Example of a good course-matching submission:

Course Contents/Syllabus : The overall aim is to provide the students an understanding of - process dynamics - the operation and application of simple feedforward and feedback control - how measurements and actuators can be connected in a process plant The course should thus provide the student the ability to design single input - single output (SISO) control systems for chemical and biotechnical processes with continuous and batchwise operation.

URL for Course Info : <http://www.kvser.dtu.dk/xxxx.aspx?menulanguage=en-gb>

Total Number of Contact Hours for the entire course : Lecture= 26 hours, Tutorial= 13 hours, Laboratory/ Project Work = 13 hours

Prescribed Text Books & Chapters Covered : Seborg D.E., Edgar T.F., Mellichamp D.A. (2004) Process Dynamics and Control (2nd edition), John Wiley & Sons. Or Seborg D.E., Edgar T.F., Mellichamp D.A. and Doyle F.J. (2011) Process Dynamics and Control (3rd edition), John Wiley & Sons.

Mode of Assessment : Quizzes; Design Projects; Final Exam

Number of credits awarded by host university to the course : 5

Note: Course matching submission with incomplete or incorrect details/information will be rejected.

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Courses not allowed to read during exchange

The following course matchings **will not approved** by MAE:

Course Code/Title	Course Code/Title
EG0001/ EG1001 Engineers and Society	CC0001 Inquiry and Communication in the Interdisciplinary World
HW0188 Engineering Communication I	CC0002 Navigating the Digital World
HW0288 Engineering Communication II	CC0003 Ethics & Civics in a Multi-Cultural World
GC0001 Sustainability: Seeing Through The Haze	ML0004 Career and Entrepreneurial Development for the Future World
ML0001 Absolute Basics in Career	CC0005 Healthy Living & Wellbeing
HY0001 Ethics and Moral Reasoning	CC0006 Sustainability: Human, Society, Economic & Environment
ET0001 Enterprise and Innovation	CC0007 Science & Technology for Humanity
ML0002 Career Power Up!	
ML0003 Kickstart Your career Success	

Please read the courses (you have missed) when you return.

Note: Second-year students are not allowed to read final-year courses in exchange ²¹



CAs/ Examinations

- All examinations (main, supplementary or otherwise) offered by the host university will have to be taken at the host university, not in NTU.
- If you fail the course, you will have to retake the course in NTU.
- Requests/ Appeals to sit for host university's exams in NTU will not be entertained.
- Early Examination Request at the host university or any other special requests are subject to approval by the host university and NTU.
- Transcripts must indicate all courses that have been read, including any failed courses.



AU Projection

- Students must submit the AU Projection list within the deadline mentioned on the E-Notification from OAS. Finalization of AU projection **only after you confirm all your registered courses at the host university. You can only submit this once.**
- Please **do not** submit credit transfer until you have received your official transcript (with University's seal and signature)

Sent: Tuesday, 1 October 2019 11:20 AM

To:

Cc: ug_outbound <ug_outbound@ntu.edu.sg>

Subject: Action needed for confirmation of courses registered at the host university - GEM Explorer AY 2019 S1

Dear student

We hope you have finalized your course registration at the host university. Please log in your GEM Explorer application to confirm the courses you registered at the host university.

http://cso.wis.ntu.edu.sg/webex88/owa/cso_redirect.asp?r=1&app=http://wis.ntu.edu.sg/pls/lms/instep_stud_subj_reject_notice

1. Select a sign-up profile to begin
2. Click to finalize your list of approved course-matching records
3. Select the courses that you have registered
4. Select purpose of finalizing : AU projection
5. Check the list carefully and submit

We appreciate your prompt action by 07-OCT-2019. We wish you a fruitful study experience.

Regards

Office of Academic Services

CONFIDENTIALITY: This email is intended solely for the person(s) named and may be confidential and/or privileged. If you are not the intended recipient, please delete it, notify us and do not copy, use, or disclose its contents.
Towards a sustainable earth: Print only when necessary. Thank you.

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Returning to NTU - Credit Transfer

- Please upload your transcript into the system after you have received it from the host university. Click [here](#) for steps on credit transfer.
- **Credit transfer records submitted for exchange in previous semester will be updated by the end of the following semester after necessary checks, if any.**
Example: Exchange in AY22/23 Sem 1, Credit transfer will be updated by end of AY22/23 Sem 2.
- ***Credit transfer requests are processed in batches. Please be patient for any delays.***
- If you have taken a pre-requisite course during exchange, your credit transfer will not be completed in time for your course registration in NTU.
Example: Read MA3001 Machine Element Design overseas and intend to read MA4001 Engineering Design in the coming semester.
- Please email mae_reg@ntu.edu.sg stating the course you want to read and the pre-requisites which you have completed overseas before the course registration period.
- For credit transfer matters, please contact Ms Tiana (thaiyana@ntu.edu.sg).

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Useful Links

- [Student Intranet](#)
- [MAE Exchange Page](#)

Student Services

NTUlearn

Academic Matters

Academic Calendar, Structure & Integrity, Study programmes & curriculum, Matriculation & Candidatur...

Career & Internship

Coaching & Exploration, Workshops & Exhibitions, Global Experience, Internship, Career resources

Global Education & Mobility

GEM Discoverer, Explorerer & Trailblazer, Virtual Education, Singapore Universities Student Exchange...

Library Resources

OneSearch, Library Facilities & Events

Vaccination Status Declaration

Aerospace Engineering

Mechanical Engineering

Registration of Calculators

Internship

Exchange Programmes

Essential Documents

Exchange Programmes

Overseas Exchange Programmes allow students to meet requirements. The benefits of such programmes include:

- experience of an international education
- developing global perspectives
- cultural immersion
- facilitates any learning of foreign languages
- networking opportunities

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Contact Information

School of MAE



Scan here

Website:

<https://www.ntu.edu.sg/mae/admissions/current-students/undergraduate/student-exchange>

OGEM

GEM Explorer

gem-explorer@ntu.edu.sg

GEM Discoverer

gemdiscoverer@ntu.edu.sg

Website:

<https://entuedu.sharepoint.com/sites/Student/SitePages/gmlisting.aspx>

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Thank you!

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